Kim-Stan Landfill

EPA Region 3
Virginia
Aleghany County
Selma

EPA ID# VAD077923449

9th Congressional District

Last Update: August 2002

Other Names: None

Current Site Status

The U.S. Environmental Protection Agency (EPA) has recently concluded an investigation to determine the nature and extent of contamination and the risks posed to human health and the environment by the hazardous substances are on the site. EPA released its proposed plan for cleanup of the site on July 24, 2002 and presented the plan at a public meeting held on July 30, 2002. The proposed plan calls for capping the landfill, collecting and conveying leachate to the local publically owned treatment works (POTW). The project requires that the POTW capacity be upgraded. EPA awarded a Technical Assistance Grant to a group of local residents called the Kim-Stan Advisory Committee. The Advisory Committee has been closely following the progress of EPA's investigation and joined Allegheny County in formally endorsing EPA's proposed plan at the public meeting. The Record of Decision, identifying the final plan and responding to public comments is on schedule to be issued in Fall 2002.

Site Description

The 24-acre Kim-Stan Landfill is located in Alleghany County, a predominately rural county of west central Virginia. The landfill is situated in a mixed commercial/residential area of Selma, Virginia. The unlined landfill, which has been inactive since 1990, lies along the southern edge of VA Route 696, approximately 1,000 feet south of the Jackson River. The landfill is bordered on the east by the Bennett Lumber Company and on the west by property formerly used by another lumber company. Across VA Route 696 lies the historic Oakland Church, CSX Railroad property with associated wetlands, and a string of ox-bow "ponds" which drain into the Jackson River.

Prior to work undertaken by Allegheny County public works, a large volume of surface water ran onto the landfill from the Rich Patch Mountains south of the landfill. The lack of any substantial surface water runoff and leachate containment was a major problem at the Kim-Stan landfill. During large rain events, storm water runoff from the Kim-Stan landfill drained northward as sheet flows and frequently flooded the highway on the northern border of the landfill, carrying runoff onto the Oakland Church and CSX Railroad properties, wetlands, and ox-bow "ponds." Sampling results indicated that hazardous substances from the landfill contaminated nearby wetlands and the ox-bow "ponds," which the public uses as a fishery. During the period of 2000-2001, Allegheny County, with the endorsement of EPA and the Virginia Department of Environmental Quality, completed a project to divert clean storm water around the landfill thereby reducing the volume of leachate generation.

The Kim-Stan Landfill operated as a sanitary/industrial landfill for almost twenty years, and reportedly received approximately 865,000 tons of waste between November 1972 and May 1990. The depth of the waste buried at the landfill has been estimated at up to 80 feet thick. Wastes known to have been disposed of at the landfill include 5,000 gallons of waste oils contaminated with polychlorinated biphenyls, and unknown quantities of aluminum sludges containing mercury, asbestos, and medical waste. Backhoe test pit data and information collected by local citizens indicate that landfilled wastes were derived from a wide range of sources, including hospitals, light industrial plants, manufacturing plants, automobile repair shops and dry cleaners.

While the landfill was in operation, the owner/operators undertook several measures to attempt to address surface runoff and leachate inflow. None of the measures taken to contain leachate within the boundary of the landfill was successful. During the summer of 1989, a 400,000-gallon storage basin was constructed on top of the refuse to replace the two buried 4,000-gallon steel tanks that had proved inadequate to contain the large volume of leachate being generated at the landfill.

Beginning in 1982, a number of organizations, including EPA Region III and the Commonwealth of Virginia, have collected environmental media samples to assess the surface water runoff and leachate problem at the landfill. These sampling results provide evidence that hazardous substances are migrating from the landfill into the environment. Both ground water and surface water are being contaminated.

The landfill was shut down by court order on May 11, 1990. When operations ceased, the active part of the landfill remained uncovered. The thickness of the soil cover over the rest of the landfill generally did not exceed 6 inches. Although the Commonwealth of Virginia and Allegheny County have undertaken several measures since 1990 to improve conditions at the landfill, surface runoff and leachate discharge still continues to pose environmental concerns.

Site Responsibility

Cleanup of this site is the responsibility of the federal and state governments.

NPL Listing History

Our country's most serious, uncontrolled, or abandoned hazardous waste sites can be cleaned using federal money. To be eligible for federal cleanup money, a site must be put on the National Priorities List. This site was proposed to the list on April 23, 1999 and formally added to the list on July 22, 1999.

Threats and Contaminants

The July 2002 Remedial Investigation (RI) determined that ground water has been impacted by vinyl chloride, arsenic manganese and

thallium. Landfill leachate contains elevated concentrations of antimony, barium, nickel, thallium, manganese, arsenic and vinyl chloride.

Contaminant descriptions and associated risk factors are available on the Agency for Toxic Substance and Disease Registry, an arm of the CDC, web site at http://www.atsdr.cdc.gov/hazdat.html EXIT disclaimer

Cleanup Progress

In June 2000, Alleghany County began a storm water diversion project designed to intercept clean surface water and ground water flowing down from the Rich Patch mountains and convey the clean water around the landfill. The storm water diversion project was successfully completed in 2001. Allegheny County does not bear any responsibility for conditions at the landfill but has been conducting the work in demonstration of its commitment to protecting the health and welfare of its citizens.

Along a parallel path, EPA conducted a fund-financed Remedial Investigation and Feasibility Study (RI/FS) at the site, concluding with its release of a proposed plan to address residual risks presented by the landfill in July 2002. As part of the RI, environmental samples were collected from the air, soil, surface water, sediments and ground water and a risk assessment was completed. EPA's proposed plan calls for: installation of an impermeable landfill cap to prevent infiltration of rain water through the buried wastes; control of leachate with a collector trench; convence of that leachate to the Low-Moor water treatment plant for cleaning; ground water monitoring; and institutional controls to protect the integrity of the constructed remedy and prevent potable use of ground water in the vicinity of the landfill. In addition, the plan provides for the upgrade of the water treatment plant to efficiently address the increased volume of water. After full consideration of public comments on the proposed plan, EPA expects to issue a Record of Decision in the Fall 2002.

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